

CLAIMS

1. A tissue section-containing carrier for culture of animal cells.

2. The cell culture carrier as claimed in claim 1, wherein the tissue section is stuck to a support or stuck thereto while stretched.

3. The cell culture carrier as claimed in claim 2, wherein the support is at least one selected from glass, plastics, rubber, metal, natural or synthetic thread and/or its woven matters, and biodegradable materials.

4. The cell culture carrier as claimed in claim 2 or 3, wherein the support is previously processed for promoting the section adhesion thereto or for promoting the section adhesion thereto under stretch.

5. The cell culture carrier as claimed in claim 1, for which the tissue is prepared from a fresh tissue or a tissue previously fixed by the use of a fixing reagent.

6. The cell culture carrier as claimed in claim 1, for which the tissue is processed for acellularization before or after it has been sectioned.

7. The cell culture carrier as claimed in claim 1, wherein the tissue section is treated with an antibody or a nucleic acid probe capable of binding a physiologically-active agent to thereby introduce an exogenous physiologically-active agent into a specific site of the section.

RECEIVED TIMENOV. 29. 5:42AM

PRINT TIMENOV. 29. 6:01AM

09980246-010302

8. The cell culture carrier as claimed in claim 1, wherein the tissue section is biologically treated with enzyme or the like or chemically treated with acid, alkali, surfactant or the like to thereby change or modify the constituent components and/or the microstructure of the tissue section.

9. The cell culture carrier as claimed in claim 1, for which the tissue to be sectioned is previously frozen, or embedded by freezing, or embedded in paraffin or resin.

10. The cell culture carrier as claimed in claim 1, for which the tissue is derived from animals or plants.

11. The cell culture carrier as claimed in claim 10, for which the tissue is derived from mammals.

12. The cell culture carrier as claimed in claim 1, for which the tissue is derived from a part or all of an unborn animal living in its mother during the developmental stage.

13. The cell culture carrier as claimed in claim 1, for which the tissue is derived from a part or all of a born animal.

14. A method of cell culture, which comprises fitting the cell culture carrier of any of claims 1 to 13 in a culture vessel, and culturing animal cells therein.

15. The cell culture method as claimed in claim 14, wherein animal cell suspensions, tissue explants, blastocysts, or three-dimensionally reconstructed multicellular aggregates are seeded on the carrier to start the culture of the animal cells thereon.

RECEIVED T!MENOV. 29. 5:42AM

PRINT TIMENOV. 29. 6:01AM

0390245 010302

16. The cell culture method as claimed in claim 14 or 15, wherein the animal cells seeded on the carrier, adhere proliferate, and subsequently peel the section or the section-derived tissue with the proliferated cells from the support of any of claims 2 to 4.

17. The cell culture method as claimed in claim 16, wherein the section or the section-derived tissue with the proliferated cells is, after peeled from the support, further cultured to thereby form three-dimensional multicellular aggregates that have involved the section or the section-derived tissue therein.

18. The cell culture method as claimed in claim 14, wherein the animal cells to be cultured are of one or more types selected from primary culture cells, cells of established cell lines, blastocysts and/or those cells with an exogenous gene introduced thereinto.

19. The cell culture method as claimed in claim 14, wherein the animal cells to be cultured are derived from any of undifferentiated stem cells, cells under differentiation, terminally differentiated cells and/or dedifferentiated cells.

20. The cell culture method as claimed in claim 19, wherein the undifferentiated stem cells are especially embryonic stem cells.

21. The cell culture method as claimed in any of claims 14 to 20, wherein the culture medium for culturing the animal cells therein is a serum-containing culture medium or a

serum-free culture medium not containing serum.

22. A method for transplanting the animal cells having been cultured according to the cell culture method of any of claims 14 to 21, into animals.

23. The cell transplantation method as claimed in claim 22, wherein the animals into which the cultured cells are transplanted are mammals.

09980246.010302
20011129 09:42:00

RECEIVED TIMENOV. 29. 5:42AM

PRINT TIMENOV. 29. 6:02AM